PHILADELPHIA, APRIL 12, 1879.

## ORIGINAL LECTURES.

### CLINICAL LECTURE ON BURNS.

BY R. J. LEVIS, M.D.,

Surgeon to the Pennsylvania Hospital and to the Jefferson College Hospital.

*Delivered at the Pennsylvania Hospital.*

NO injuries of ordinary occurrence produce such great and prolonged suffering as burns. Unfortunately, they are rapidly increasing in frequency and severity, due to the use of heat in mechanical occupations, to the universal presence of friction-matches, and, most seriously, to the extended application of highly-inflammable and even explosive fluids for the purpose of illumination. Petroleum is answerable for a great number of the most dreadful of these injuries that we admit to the wards, and the ignorant or careless use of it in attempting to kindle fires, or in filling lamps whilst the wick is still burning, causes some of the greatest human misery and frequent death.

Probably our hospital experience would show that no class of injuries, in proportion to the number, is so fatal. The majority of burns are of domestic occurrence, and women and children the most frequent sufferers. Our records give evidence of the great mortality of cases of burns among children, and of the termination of the sufferings of many, dying within a short period after their admission to the wards, without reaction from the primary shock of injury.

You have seen already, during this clinical term, how varied may be the character of injuries from the application of either dry or moist heat, from a mere erythematous redness of the skin produced by a momentary flash of burning gas or escaping steam to the total disorganization and destruction of a part. Burns vary in severity according to their extent of surface as well as to destructive depth. The complete incineration of a part, as a hand or a foot, might be a matter of less gravity than even a merely diffuse erythema affecting a large area of the skin. A man once walked into this hospital who had fallen into a vat or tank, and was immersed in water not hot enough to produce more than a superficial irritation of the derma, and without in any place blistering, yet he died within a very few hours. I have had cases in which part of a limb has been totally charred, through integuments, muscles, and even bone. One was that of a man who had been held for some time in the ruins of a fallen blast-furnace, whilst portions of his feet and hands were immersed in flowing molten metal until even the bones were charred; yet he recovered,—of course in a maimed condition. In another instance a man's leg was, by a curious accident, so held in a pot of molten iron that he could not extricate it, and the disorganization was total. So it is evident to you how the grades of such injury must vary.

Arbitrary classifications of burns are made by some surgical authorities, based on their depth, but you need not be troubled about memorizing six or eight distinctions if you will merely bear in mind that the pathological significance, the prognosis, and the treatment of the injury will vary with its locality, the extent of surface involved, and the depth of penetration. If the application of heat be only momentary, a mere erythematous redness will follow, the cuticle will soon desquamate, and then complete restoration will ensue. A more prolonged application of heat will produce serous effusion, elevating the cuticle in the familiar blisters or bullæ. A deeper burn disorganizes the entire skin so that effusion cannot take place; and I have spoken of still deeper destruction, even to the complete incineration, of a part.

A scald results from the application of moist heat, which, with water or steam, is not usually above a temperature of 212°, and the action is liable to be but momentary and superficial in effect. But the prolonged impression of moist heat may be as destructive—and in a pathological view the effect is the same—as that of dry heat, and I am inclined to use the word burn in a generic sense, to include the general action of heat, moist or dry, on the body.

Some of the cases of deeply destructive burning of parts I have seen among persons who were insensible at the time of receiving the injury, as in cases of epileptics who have fallen into open fires or against stoves, and the coma of drunkenness has frequently caused the same. One of the most extensive and deep burns I

have ever seen in these wards was in the case of a man who was at the time intoxicated by the fumes of a lime-kiln by which he had lain to warm himself until his back was deeply roasted from the nape to the coccyx.

It is one of the curious traditions of surgery that the effect of exposure of the surface of the body to the rays of the sun, producing erythema of the skin, is in the text-books classed with burns. That effect is rather due to the intensity of solar light than to heat. I have seen the so-called sun-burn produced when the air was cold and the parts exposed necessarily colder than those which remained covered by clothing; and in the case of a boy whose neck and back were extensively vesicated from exposure to the sun whilst bathing, the skin had been continually wet with cold water, and actual burning was impossible.

When a severely burned patient is first brought into the wards, our attention is at once directed to two important and urgent demands of treatment,—the great pain that he is suffering, and the shock of injury. The immediate inhalation of an anæsthetic and a hypodermic injection of morphia are the speedy recourse, and these should be followed, if pain continues, by the internal administration of morphia, decisively, but yet with caution. When the injury is very severe and the prostration extreme, the patient is sure soon to have well-marked rigors, with tremor, and the sensation of heat yields to a distressing chilliness. In the severest cases coma comes mercifully, and continues until death relieves the sufferer. When there is evidence of great general shock, it must be treated, as in ordinary traumatic injuries, by stimulants, quinine, nutrients, and warmth. If the clinical thermometer, placed beneath the tongue, indicates a temperature below the normal, it may not be enough to wrap the patient in blankets, which merely retard the escape of heat from the body, but warmth must be artificially imparted by contact with cans of hot water placed beneath the coverings.

The removal of the clothes of a badly-burned patient should be effected with the greatest care, cutting them off and removing them in portions, so as to avoid detaching the adherent cuticle. When blisters or bullæ exist, they should be merely punctured with the point of a needle, so as gradually to drain away the serum, always leaving the epidermis as the natural and unirritating protection for the burned surface.

After the first considerations of relieving pain and shock to the system, the local treatment of burned surfaces will require attention, and this must vary with the portion of the body injured, and also with the superficial extent and depth. Patients are always distressed by the desiccating influence of the air on even slightly-burned parts, and protection by dressings with lotions or unguents is essential. We are, in these wards, in the habit of applying, at first, mildly-astringent and antiseptic unguents for this purpose, such as the benzoated ointment of the oxide of zinc, or the carbolized ointment of the oxide, in the proportion of one part of carbolic acid to sixteen or twenty of the ointment. Such applications are soothing and disinfectant: and, if the surface is extensively blistered, with the epidermis broken, the comfort of the patient will be much increased by encasing the part in a layer of carded cotton, frequent disturbance of the dressing being carefully avoided.

In cases of extensive burn of the surface of the trunk and extremities, involving a very large area of skin, and where changes of the dressing would cause much suffering, I have directed that almost the entire body be simply wrapped in a linen sheet saturated with a slightly carbolized oil. For this purpose linseed oil, from its viscid character, is probably the best.

Most of the domestic remedies which are resorted to have some merit in at least protecting the parts from the air, but such popular applications as flour, molasses, starch, soap, and glue have the inconvenience of being dirty, and some of them incline to form crusty masses over the surface which are not easily removable. The familiar combination of linseed oil and lime-water—a soapy emulsion—has no real merit, and has the disadvantage of becoming disgustingly offensive when combined with the discharges from burned surfaces. It is at all times exceedingly difficult to prevent fetid effluvia from the bodies of patients who are extensively burned; and such are the most offensive surgical cases we ever have in the wards. As ablutions and frequent changes of dressings are attended with suffering, the prevention of putridity is best effected by the

use of carbolic acid, which has the property of being a local anæsthetic as well as an antiseptic.

The application of a paint of carbonate of lead and linseed oil, as practised by Professor Gross, is said to be very soothing, quickly relieving pain, and it has the merit of being readily attainable in places where severe burns are apt to occur. The originator of this treatment says that he has never seen evidence of its being followed by the specific toxical effects of lead, even where the dressing is extensively applied; but in individuals who are peculiarly susceptible to saturnine influence it might be dangerous. A recently-proposed remedy, which has remarkable virtues claimed for it, is the bicarbonate of sodium, in fine powder, dusted over the burned surface or applied as a saturated aqueous solution. It is said to relieve pain instantly, and that burns heal readily under the application. The watery solution of bicarbonate of sodium would have the serious objection of other wet dressings,—in chilling the patient, when largely used,—and it must be remembered that during the existence of shock from burns the temperature is often much below the normal, and that the restoration and maintenance of warmth should be a primary object. Dr. Ludlow, of this city, states that the application of the ordinary brown resin soap, spread on linen cloths, quickly relieves pain, and is a very satisfactory dressing.

When mortification of a part occurs from a deeply-penetrating burn it must be treated, as gangrene from other traumatic causes, with cataplasms and antiseptics, to facilitate separation of the dead from the living tissues, and to avoid fetor and septic infection of the patient's system.

There are some remarkable visceral complications of burns which you should watchfully and carefully anticipate, and, if possible, guard against. The statistics of death from burns show that associated intra-thoracic, intra-abdominal, and cerebral lesions are the causes of death in nearly one-half of the fatal cases. These affections are usually either congestion or inflammation, and are ordinarily associated with burns of the overlying integument. Generally tonic and stimulating treatment seems to be the most available in such complications.

There are other serious pathological associations of burns, to which I can at this moment make but passing reference. Intestinal ulceration is a frequent and curious attendant of extensive burns, particularly of the trunk, and causes many fatal terminations. This remarkable associated lesion, which affects the mucous membrane of the small intestines, particularly the duodenum, is not well explained, and cannot always be diagnosticated, but the persistence of uncontrollable diarrhœa and vomiting should incline you to direct your attention to the probability of the existence of such lesion.

There are some structural changes resulting from burns involving destruction of integument, which result in cicatricial contraction, and often require the aid of reparative or plastic surgery for their relief. The contact of denuded surfaces is liable to result in their unnatural union: so they should, by position and by dressings, be kept apart, and in parts liable to be deformed by contraction the healing integument should be kept stretched until long after cicatrization is completed.

## ORIGINAL COMMUNICATIONS.

### EPIDEMIC VASO-MOTOR FEVER.

BY HUGO ENGEL, A.M., M.D.,
Lecturer on Electro-Therapeutics at Jefferson Medical College, Physician to St. Mary's Hospital, etc.

FOUR years ago I saw a remarkable case of sickness, and again a similar one two years ago, when catarrhal fever was somewhat epidemic in Philadelphia, and now this year, with its undoubted epidemy of grippe, I have observed two more such cases, and members of the profession have told me of several in their practice. All these cases were of such a similar character from beginning to end that I have come to the conclusion that we have to do here with a disease not described as yet, or with a complication or rare form of an already well-known disease, but of which this special variety has not been mentioned yet by any of our modern writers. Nowhere could I find a description of it or all its symptoms combined, and I consider it therefore my duty to give a history of one of the cases, which may be accepted as the type of the affection.

*Case.*—J. K., 49 years old, after having observed for three days a falling off of the ap-

petite, awoke, on the morning of February 2, 1879, with moderate fever, severe pain and soreness in the throat, pain on swallowing, nausea, and chilly sensations. Being a careful man, he sent for his physician, and I arrived there the same morning. His state was then the following. Sanguine constitution, florid complexion, robust, and with much adipose tissue. Temperature 101°; pulse 108, full and hard; patient is weak and depressed; skin moist, slightly yellow on forehead, around the eyes, and on back of hands; conjunctiva slightly yellow; a papular, itching, and, on scratching, easily bleeding eruption, confined to calf of legs, ankles, and back,—much more on right than left side; tongue moist, thickly coated at the back with a yellowish fur, large and flabby; much nausea; slight tenderness across the stomach; area of hepatic dulness not increased; bowels had a normal motion the same morning; urine somewhat high-colored; specific gravity 1029; increase of uric acid; no albumen; no bile-pigment; spleen not enlarged; severe pain on right side of neck; tonsils both greatly swollen, but the right one more, which has a purplish hue; mucous membrane of pharynx swollen. Patient complains of the above-mentioned symptoms, to which a dry cough is added. Schneiderian mucous membrane not affected, but frequent epistaxis; percussion over lungs clear; auscultation: harsh breathing and large, dry râles. Towards night he complained of great dyspnœa. He had pain in all his limbs, and perspired freely.

I prescribed the patient an emetic,—my usual procedure for acute tonsillitis in robust persons, if accompanied by much nausea,—followed this by quinine in small doses, and within three days the patient was free of his tonsillitis, his bronchitis, his gastric, respiratory, and liver symptoms, and the temperature had fallen to 99°. Two days later, though severe sweats set in, the temperature went up again, and became stationary at 101½°, declining in the mornings ½°; the same pains, especially on right side of neck, returned, and there appeared, at first, swelling of right calf, then of left calf, then of dorsum of left hand; then the whole integument of the right side of the face swelled so that the eyeball could not be seen; then again the dorsum of right hand swelled. These swellings alternated as described, each lasting about eighteen hours. Skin over swelling had, at least in the face, a very slight blush over it; did not pit on pressure; the swollen parts were painful, not from tension, but on motion or touch, and the temperature over swollen parts was, as the surface-thermometer showed, ½° higher. I examined the urine twice daily; it never showed the slightest trace of albumen; quantity a little over two pints, which, considering the sweats, must be taken for normal. The temperature never fell during or after a sweat, and there was no regularity whatsoever in the recurrence of the latter. There were no brain symptoms, only restlessness at night; the pupil of right side was somewhat dilated, and the right auriculo-maxillary fossa was very tender to the touch, and the integument above it swollen; the bowels continued normal; heart normal.

These symptoms dragged on for two weeks, when they gradually made their disappearance, and after an illness, therefore, of about three weeks' duration, the patient was convalescent, with no residue except some weakness in the muscles.

*Remarks.*—The other cases were about the same. In one case the tonsillitis was only very moderate and strictly one-sided; in one the œdema was confined to the right face and neck, and the disease was only of ten days' duration. Besides attending to the tonsillitis and bronchitis, I put the patients on a fever diet,—milk, beef-tea, broths, etc.,—applied leeches to the neck in some cases, gave them a diaphoretic fever-mixture, followed by quinine, and treated special symptoms as they arose.

Now, as regards diagnosis, the disease was not pure tonsillitis. The debility, the continuance of the symptoms after the disappearance of the tonsillitis, and the rapidity with which the latter left the scene, are against the supposition. Diphtheria would have somewhere shown the false membranes; bronchitis alone would have continued longer and, after its cure, left no symptoms. In simple biliousness the liver is a little enlarged, there is bile vomited; while here the urine contained no biliary coloring-matter, the gastric symptoms left rapidly, but the pain and swellings remained. It could not have been tonsillitis and bronchitis, followed by acute muscular rheumatism, as the debility in the strong man was too great from the beginning, and as in muscular rheumatism the affected parts never change color, and do not swell,—surely not the face. Erysipelas migrans can be left out of the question, as the swellings disappeared too rapidly, had not at all the appearance of erysipelas, and as we find in the latter albumen in the urine and no pains. The examination of the urine excluded diffuse kidney affection; in sudor anglicus there are no swellings, and in so-called inflammatory dropsy we have, after an exposure to cold and damp, suddenly a general anasarca, with fever developed. The spleen showed no enlargement, and I convinced myself that decided doses

of quinine had no influence on the course of the disease; we can exclude, therefore, malaria. Local affections of the vaso-motor system show a history. There may be fever, but it is of short duration; the trophic disturbances are marked, and the locality is not changed. According to my idea, there are only two questions left open,—is it a new disease, or an undescribed variety of influenza? The first case I saw happened when, to my knowledge, not a single case of catarrhal fever existed in the town. We have, besides, never such sweats, neither such a rapid disappearance of the catarrhal symptoms, and, according to all authors, no swellings in catarrhal fever. The vaso-motor system is surely responsible for some of the symptoms. The tenderness at the right superior cervical ganglion; the dilated pupil; the swelling of the integument at different places, with all the symptoms of an augmented blood-supply to these parts for the time being, but with no symptoms of inflammation and rapidly disappearing to reappear somewhere else; the sweats, etc., —all these point to a vaso-motor trouble. Should the specific poison of catarrhal fever affect, in these cases specially, parts of the vaso-motor nervous system? Or is it a new disease, which seems to happen more in the spring of the year, and more in men than in women? I shall leave these questions undecided, and wait for further observations. Perhaps other physicians will report similar cases, and give their views on the subject. We must admit, though, that it looks like a continued fever, due to a specific cause. To recapitulate: without a history of exposure and cold, the affected individual loses his appetite, awakes then with fever, chilly sensations, great pain in the limbs and in back; sweats a great deal; is debilitated from beginning, and has tonsillitis and bronchitis, with epistaxis and great pain on one side of the neck,—or, at least, more there than on the other side,—and gastric disturbances. The tonsillitis and bronchitis, as well as the gastric symptoms, disappear after a few days, but the fever continues, and local swellings, alternating at different parts of the body, always, at some time or other, in the face, and sometimes only there, make their appearance. There is pain, confined to these regions, and felt specially over groups of muscles; the sweats increase without influence on temperature; there is nowhere any organic lesion to be detected, and the disease, after a duration of ten or more days, gradually leaves the patient, who for some time after feels rather weak. Such is the course. I now ask the profession, have there been many such cases in the city, and have they been seen at other times than when catarrhal fever was epidemic?

319 North Fifth Street.

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## A CASE OF CAMPHOR-POISONING, FOLLOWED BY SYMPTOMS OF ACUTE GASTRITIS—RECOVERY.

BY JULIO J. LAMADRID, M.D.,

Brooklyn, N. Y.

ON the night of December 1, 1878, I was called to see Mrs. Sarah J., aged 27, and given the following history of her case. For a number of years, but more especially within the last four weeks, she had been in the habit of eating "gum camphor," because, as she said, "I really love it." How much she took each time is uncertain, but she thinks she used to eat, each day, in small portions, what would amount to about the size of an English black walnut. On the day preceding my visit she had fainted dead away; after which she complained of great weakness and a sense of lassitude; also dizziness, and pain in the stomach and bowels. On the following day, about 9 A.M., she became insensible again, and remained in that state for about five minutes. During that time, it was noticed that her arms were contracted or in a spasmodic state, and the head was drawn back. She was restored again to consciousness by restoratives, etc. Soon after this fit, she was taken with a severe chill or coldness all over the body, accompanied by a cold perspiration, which, in spite of external warm applications, as well as warm drinks internally, lasted for over an hour. The pain in the stomach and bowels had also increased; she felt sick at the stomach, but at no time did she vomit any. She also complained of a severe pain in the head and back of the neck. Soon after reaction took place, followed by fever, during which the patient had a frequent desire for water or some cooling drinks. At the time of my first visit I found her suffering from the following symptoms: severe pain in the epigastric region, spreading over the abdomen; nausea and a burning or heating sensation, as of hot steam, from the stomach to the mouth; mouth and tongue very dry and red; the bowels, the day before, had been very loose (about a dozen times), but no action from them to-day; she complained, however, of having the intestines distended with flatus; there was also dysuria. She also complained of giddiness and mental confu-

sion; severe pain in the back of the head, extending down the spine as far as the third dorsal vertebra; the skin was dry and hot; the countenance flushed; the pulse full and frequent (102); temperature under the tongue 105° F.

*Treatment.*—Prescribed powders bismuthi subnitratis, gr. x, et morphiæ sulphatis, gr. ½, together, to be repeated every two hours till pain is relieved; after that, every three or four hours. Also cool emollient drinks and pieces of ice, taken frequently, and externally, over the stomach, applications of hot linseed-meal poultices.

December 2.—Patient better, but very weak; pulse 90 and weak; temperature 101½° F. There is some pain yet in the stomach, and great tenderness; also nausea when she moves or tries to sit up. The pain in the back of the head and neck has almost disappeared, but the neck is very stiff and sore, as is, indeed, the whole body. Her countenance is very pale and somewhat yellowish, such as is seen in chlorotic women.

The further treatment of the case was simply that of acute gastritis. The recovery was satisfactory.

*Remarks.*—In looking over the literature at my disposal upon this subject, I have failed to see mentioned the symptom which the patient complained of most next to the gastric pain, viz., pain in the back of the head and down on the neck, followed by stiffness.

Neither Prof. H. C. Wood nor Roberts Bartholow makes any reference to this symptom, and physiological or, rather, toxicological action of camphor, and to which I have called attention. Is this local pain, etc., caused by a hyperæmic or congested condition of the upper part of the spinal cord, or is it due to some other change or action unknown yet to us, and having been produced only by a long-continued use of that drug? or is it merely a coincidence?

258 Franklin Avenue, January 3, 1879.

## BOTHRIOCEPHALUS LATUS.

BY JOHN T. WALKER, Ph.G., M.D.

ON the 15th of February of this year, Miss S., an office patient of mine, requested me to prescribe a tænicide for her brother Otto, residing at No. — Columbia Avenue, both of whom came from Sweden a few months since. She stated that at irregular intervals he passed a few inches of the worm; that he had been treated by two physicians in his native country unsuccessfully, both of whom advised him to discontinue treatment unless he should experience considerable inconvenience. On this account, he reluctantly took the medicine furnished him, which, however, not only acted quickly, but thoroughly. I prescribed the following:

℞ Oleoresinæ filicis (male fern), ʒii;
Olei terebinthinæ, ʒiii;
Olei ricini, ʒxii;
Olei gaultheriæ, gtt. xii;
Pulveris acaciæ et sacchari, ää ʒiv;
Aquæ, ʒv.—M. ft. emuls.

I ordered the emulsion to be taken in divided doses before breakfast and supper, but the patient commenced and finished it by 7 A.M., without regard to time or quantity. Three hours after commencing the medicine he passed *about* fifty feet of worm, which portion was thrown away; at midnight he passed the remainder, measuring *over* one hundred feet, weighing six and a half avoirdupois ounces, which portion I presented to Prof. Joseph Leidy, who pronounced the tænia bothriocephalus latus, and the first of that species he had seen in this country, it being very common in Europe.

Since then I have seen the patient, who is a man of medium stature, light complexion, rather spare, aged 28 years, formerly a farmer.

He feels considerably relieved from the distress which he at times experienced in the epigastric region, also an almost insatiable appetite.

201 Columbia Avenue, Philadelphia.

# NOTES OF HOSPITAL PRACTICE.

## UNIVERSITY OF THE CITY OF NEW YORK.

*CLINIC OF ALFRED L. LOOMIS, M.D.,*
Professor of Pathology and Practice of Medicine.
Reported for the *Philadelphia Medical Times.*

### *AORTIC VALVULAR DISEASE OF THE HEART, WITH HYPERTROPHY AND DILATATION.*

NOW, gentlemen, I would like some of you to make a diagnosis for me in this case, although we have not very much time left for its consideration. In the first place, you will observe that this man has a countenance which strikes you at once as that of an individual who is suffering from some grave disease. It does not take long to determine that he has some trouble about the heart; and now we desire to find out, if possible, just what it is.

When the patient is stripped, we see that there is an epigastric impulse, and, on resorting to palpation, we discover that this impulse can be felt over a space six inches in width, extending from the median line to some distance beyond the line of the

left nipple. But, although the heart's impulse is spread over such an extended area, there is no increase whatever in its force, and no movement of a heaving character can be felt over the præcordial space. There is no purring thrill there, but simply an ill-defined tremor; and we would say, therefore, that the heart's impulse is both diffused and indistinct. Now, what does this suggest? *Answer.*—"Hypertrophy." Anything else? *Answer.*—"Dilatation." Yes; it suggests dilatation very evidently, but there is no hypertrophy now present, properly speaking, because, although the heart is increased in size, the force of its impulse is not augmented.

Before going any further, I wish you to understand fully that this dilatation is by far the most important feature of the case. I do not so much care about what special murmurs there may be about the heart, because, from the amount of dilatation which we find here, I readily infer that the man in all probability suffers from great shortness of breath on making the slightest exertion, œdema of the part, and indigestion, and that, if they are not already affected, the liver and the kidneys will soon become diseased, in consequence of the heart-trouble. The fact of the existence of a cardiac murmur is never of any very great importance, so far as the condition of the patient is concerned, since it does not at all affect it.

In the present instance there are two murmurs about the heart, but neither of them of itself would render the (immediate) prognosis unfavorable. Practitioners are often needlessly worried because they happen to find murmurs in their patients. The question of immediate prognosis, however, depends not on the existence of such, but rather on the point, *how much failure of heart-power is present.* For instance, I have at present under my care a patient suffering from pneumonia, who has an aortic regurgitant murmur, but I have no doubt that he will make a good recovery, because in his case there is ample compensation for the difficulty about the aortic orifice. Instead of the indistinctness about the heart's action that is observable here, the apex-beat is perfectly well marked and sufficiently strong to indicate that there is no danger. The fact of there being an epigastric impulse in this case shows that there has apparently taken place some change in the right side of the heart, and, taken in connection with the other signs here present, it affords pretty conclusive evidence that this must be dilatation. Whenever, in a cardiac case, I find that tricuspid disorder has supervened (due either to stenosis of the orifice, insufficiency of the valves, or muscular failure), I always look out for trouble ahead, because the right side of the heart is then no longer able to make compensation for the difficulty that has previously existed on the left side.

On practising auscultation with the stethoscope here, we find that there are two distinct murmurs about the heart. The first is synchronous with the first sound, and is heard with greatest intensity at the base of the heart. We conclude, therefore, that it is an aortic obstructive murmur (or direct murmur, as it is sometimes called), which is produced as the blood is pouring out of the heart. The second murmur is heard best at the apex, and takes the place of the second sound of the heart, while the blood is rushing from the auricle into the ventricle, which denotes that there is aortic regurgitation. When we investigate what effect stenosis of the aortic orifice has, we find that it produces hypertrophy of the left ventricle, because the latter has more than its ordinary share of work to do. But after a time we reach a point where the heart is no longer able to force all the blood through the contracted orifice, and then dilatation results. Dilatation always occurs during diastole, because more blood keeps flowing in than can be forced out. Now, when aortic regurgitation also supervenes, as in the present case, we have a still greater accumulation in the ventricle, from the blood coming back into it, and, as we would naturally expect, the dilatation is proportionately increased.

In such a case as this, therefore, we conclude that the prognosis is very bad, for the heart-power is now necessarily all the time diminishing.

*PULMONARY TUBERCULOSIS, WITH CAVITY.*

In this woman we find a physical sign of interest, which is so extremely well marked that I think I will be able to make it evident to the entire class. On making forcible percussion over a certain portion of the right lung, we get the well-known "cracked-pot" resonance in great perfection. The peculiar sound which gives it its name, and which is best described as

a "chink," you will notice, is heard at the latter part of the percussion-note. It is produced, as you know, by forcing air suddenly out of a cavity, and it can be very perfectly imitated, as you are no doubt aware, by clasping the hands together and striking them forcibly against the thigh. In the latter case the sound is produced in precisely the same manner, the air being thus suddenly driven from between the two hands. For the production of the cracked-pot sound in the chest, it is necessary that there should be a cavity of large size in the lung, that its walls should be quite firm, and that the percussor should strike the chest with sufficient force to drive the air out of the cavity.

This physical sign, I hold, is never heard except in connection with a very large pulmonary cavity, notwithstanding what many of the books tell you about it. A chinking sound is mentioned as being sometimes heard when percussion is made in the case of extensive consolidation of the lung in children, but this is a very different affair from the peculiar resonance which you have heard in such great perfection in the patient now before you. In pneumothorax the sound may occasionally be produced, if the cavity is not of too great size.

Let us now inquire a little more particularly into the history of this case. On questioning her, I find that the patient has been complaining for about nine months. Before that time she was in good health, but she then began to be troubled with a cough, to grow feeble, and to lose flesh. She continued to grow worse until last July and August, when she states that she was in a very low condition, but she then began to pick up again, and since then seems to have been steadily improving. She has been gradually increasing in both strength and flesh, and now, as you see, is looking pretty well.

This is often the case in phthisis. After the formation of a cavity the patient begins to improve, and then not infrequently lives quite comfortably for a long time, although the condition present precludes the possibility of final recovery. Whenever, therefore, you find that a patient is gaining flesh, and otherwise improving, after a cavity has been formed, you may take courage, for it will be in your power to do a great deal for such a patient, and his life may in all probability be preserved for many years to come.

## TRANSLATIONS.

SUBCUTANEOUS INJECTIONS OF ATROPIA IN HYSTERICAL VOMITING. — Czernicki (*Cbl. f. Chir.*, No. 5, 1879; from *Gaz. Hebdom.*) had occasion to observe the case of a girl of 15, in whom hysteria had shown itself in the most varied manifestations during nine months. Among the most striking symptoms was severe gastralgia, with uncontrollable vomiting. The patient's intellectual faculties appeared quite normal. The attacks of vomiting occurred after meals, about one-third of the food being regurgitated. Finally, the patient could not retain the smallest quantities of milk or water. All the various means employed to check the vomiting—counter-irritation, injections of morphia, etc.—finally lost their power entirely, and the patient became rapidly emaciated.

With a view to diminish the evil influence of continued morphia injections by the antagonistic effect of atropia, and also to allay the muscular contraction which gave rise to vomiting, the two remedies were employed simultaneously as follows. Shortly after a meal one centigramme (⅙ gr.) of morphia was injected, and five minutes later half a milligramme ($\frac{1}{180}$ gr.) sulphate of atropia. The influence of the morphia was very perceptible. If morphia alone was injected, the gastralgia was allayed, but the vomiting persisted. If sulphate of atropia was injected alone, the food was retained, but gastralgia set in immediately. These injections, although gradually diminished in amount, had to be kept up for three months, when at last the vomiting and then the gastralgia disappeared, and the patient was restored to tolerable health. Czernicki has since then used the same combination successfully in relieving the pain and vomiting in a case of cancer of the stomach. X.

BIVINE'S METHOD OF TREATING STRYCHNIA-POISONING.—Th. Husemann (*Cbl. f. Med. Wissen.*, 1879, p. 59), having seen Bivine's statement that in a given case of strychnia-poisoning 40 grains of bromide of potassium with 10 to 20 grains of hydrate of chloral acted more favorably than 120 grains of the bromide or 40 grains of chloral separately, determined to examine into the matter himself. He examined, first, the influence exercised by the administration of bromide of potassium upon animals already narcotized by chloral, and found

that no more effect was produced than when chloral was given alone. Repetition of Bivine's experiments failed to show any advantage of the combination of chloral and bromide of potassium, in strychnia, over either drug employed alone. In both cases the convulsions were stayed, and a favorable termination ensued. Very large doses of chloral could not be given, on account of toxic symptoms from this drug. The chief advantage of the bromide of potassium, according to Husemann, is to combine with the strychnia into an insoluble salt.

SCLERODERMA AND LOCAL ASPHYXIA OF THE EXTREMITIES.—Grasset and Apolinanario (*Cbl. f. Chir.*, 1879, No. 8; from *Gaz. des Hôpitaux*) give the case of a young girl who, at 14, suffered frost-bite in both hands. Muscular atrophy of the left arm appeared later; pemphigus-like blebs appeared, from time to time, on the extensor surfaces of both hands, particularly over the joints of the fingers. Sometimes these left red patches behind; occasionally they were followed by cicatricial thickening of the skin. At the time of examination, the patient being 17 years of age, these had ceased to form. There was then cicatricial contraction of the fingers, with hypertrophy and sclerosis of the skin on the hands. The finger-nails were generally atrophic and deformed. There was muscular atrophy of both arms, with diminished sensibility on the left side. Later, *malis perforans pedis* was observed; the phalanges of the fingers were gradually lost by ulceration and contraction; the red color of the patches above-mentioned changed to brown; they spread over the body and face, everywhere accompanied by thickening of the skin and loss of sensibility. In short, the characteristics of scleroderma were complete. The authors consider the case one of local asphyxia originating from the frost-bite. The formation of blebs was probably connected, from the beginning, with decided nervous disturbance, anæsthesia, and muscular atrophy. Nothing is said of the further course of the disease.

PATHOLOGICAL CHANGES IN THE LUNGS, FOLLOWING PARALYSIS OF THE VAGI.—O. Frey (*Berlin. Klin. Wochens.*, 1879, p. 49; from a monograph) investigated the condition of the lungs after section of both vagi. In some cases, serous effusion into the respiratory passages, hyperæmic thickening, broncho-pneumonic foci, and emphysema followed. Death resulted from suffocation. In other instances, the greater part of the lungs remained healthy, inflammation, with cloudiness and swelling of the epithelium, however, showing itself in a limited portion. We further learn from Frey that simple narrowing of the air-passages gives rise to vesicular emphysema or to atelectasis, but never to inflammation; that section of the recurrent nerve on one side is without result; section of the recurrent of both sides, however, is followed by broncho-pneumonia, in case paralysis of the œsophagus is brought about and bits of food get into the air-passages; and, finally, that paralysis of the cardiac vagi either does not exercise any influence upon the lungs, or has only a very secondary influence. What has been said of the cardiac branches of the vagi may also be stated of the lung-branches: so that in general it may be asserted that inflammation of the lung arises when, through paralysis of the larynx and œsophagus, foreign substances penetrate into the air-passages.

THE TROPHIC RELATIONS OF THE VAGI TO THE CARDIAC MUSCLE.—In the same number of the *Wochenschrift* a monograph of Eichhorst is analyzed. Eichhorst studied the effect of cutting the vagi of both sides in fowls, rabbits, and dogs. He arrived at the following results. In fowls death results from acute fatty degeneration of the heart and cardiac paralysis of a trophic origin; in rabbits and dogs, when tracheotomy was first performed to prevent pneumonia, death nevertheless resulted from trophic paralysis of the heart. Changes in the muscular tissue of the heart were observed after death in rabbits.

THE AUTOMATIC ACTION OF THE RESPIRATORY CENTRES, AND THEIR RELATIONS TO THE VAGUS AND OTHER RESPIRATORY NERVES.—The *Wochenschrift* also contains a note on Burkhart's investigations (*Arch. f. d. ges. Physiol.*). Burkhart finds that animals who have been bled freely can be put into an apnœic condition more easily and longer by artificial respiration than before; that Rosenthal's statements relative to the influence of the vagus and laryngeus superior on respiration may be confirmed, while Rosenbach's theory of inhibitory nerves running through the vagus to the "*nœud vital*" is untenable; and concludes, as a result of his own ex-

periments, that the influence of the respiratory filaments of the vagus is direct, and not through the blood-vessels. Burkhart failed to prove this with regard to the expiratory nerves.

Bucco-Pharyngeal Tuberculosis.—Laboulbène, in a clinical lecture published in *La France Médicale*, Nos. 15 and 16 of the current year, gives notes of a case of this unusual form of disease, together with the results of the autopsy, some historical account of the affection, and a brief summary of the symptoms presented. During the first period, which passes almost always unperceived, a few grayish granulations can be seen on the bucco-pharyngeal mucous membrane, but there are no other symptoms. Ulceration begins by the fall of the epithelium, which lays bare the granulation; the stage of pain now begins; the impression of cold air, the contact of wine, of food, movements of the tongue, give rise to pain, sometimes so severe that the patient refuses food. Salivation, sometimes excessive, occurs. There is, however, no involvement of the salivary or cervical glands. Later, the patient shows signs of pulmonary, abdominal, or cerebral phthisis. On examining a case of this kind, one is struck by the fact that the edges of the ulcers are elevated and festooned; some of them, however, are sharply rounded, while others resemble the trail of a worm on a piece of cloth. The former ulcers are old, the latter recent,—a characteristic which is wanting in syphilis. Around these older ulcers is a yellowish patch, composed of tuberculous infiltration, which is pathognomonic. The ulcers last for a greater or less time, but they are curable. Dr. Laboulbène gives the differential diagnosis between these ulcers and those of the various forms of syphilis, of epithelioma, buccal psoriasis, etc. The treatment recommended includes such caustics as tincture of iodine, nitrate of silver, perchloride of iron, together with emollient washes. Especial attention must be paid to the patient's general condition.

Regeneration of the Vitreous Humor.—M. Gréhant recently read a note from M. Philipeaux, at the Société de Biologie (*Le Mouvement Méd.*, 1879, p. 125), on the regeneration of the vitreous humor in animals. M. Philipeaux's experiments were made upon twelve young rabbits and the same number of guinea-pigs. One of each of these animals' eyes was nearly completely emptied, and within a month after the operation commencing regeneration of the vitreous humor could already be perceived. After various experiments, M. Philipeaux concludes, 1st, that the vitreous humor, even if almost entirely removed from living animals, may be regenerated just like other organs, providing a part remains; 2d, that the vitreous humor, in becoming itself regenerated, may regenerate the capsule of the crystalline lens, and this the lens itself.

Choreic Movements of the Left Hand induced by a Cerebral Tumor.—A curious observation, which goes to confirm the much-discussed doctrine of the localization of cerebral functions, is reported by Dr. Emile Demange (*Le Mouvement Méd.*, 1879, p. 126). A woman, 64 years of age, of small stature, had presented, since the age of 12, a complete deformity of the vertebral column and of the thorax; the rest of the bony frame, however, was normal. When the movements of the upper limbs were examined, it could be seen that on the right side these were performed regularly; on the left side, however, the movements of the hand and forearm became choreic when the patient attempted to seize any object. At that movement the ring-finger and little finger were seized by a sort of spasm; the fingers spread out like a fan; the hand became flexed on the wrist; it was carried hesitatingly towards the desired object, which could only be seized after several spasmodic efforts. Nothing similar to this could be observed in the left leg or in the side of the face. This choreic movement of the hand had existed for many years,—how many the patient could not say. The tongue was unaffected; there was no disturbance of sensation.

The patient having succumbed to some intercurrent disorder, a post-mortem examination showed numerous adhesions between the calvarium and meninges. Along the right edge of the antero-posterior suture a series of deeply excavated depressions existed in the bony wall. The largest of these, situated on the summit of the vertex to the right, was the size of a quarter-dollar; it was hollowed out, as if cut with a punch; the bony lamella which formed its bottom was two to three millimetres in thickness. The other depres-

sions were the size of lentils. About the borders of these depressions the meninges were thin, opaque, adherent, and corresponding to each of the depressions was a tumor situated on the cerebral convolutions, pushing out and filling up the hollow in the bone. The chief tumor was the size of a large hazel-nut, and occupied *the posterior fourth of the anterior right frontal convolution and the upper third of the right ascending frontal convolution.* This is the exact point, according to Ferrier, where a cortical psycho-motor centre exists which governs the movements of the hand and arm, and which may be called the *centre of prehension.* The permanent excitation of this centre by the choreic meningitis, and the confinement of the tumor by the bony covering of the brain, explain the choreic movements observed.

ARREST OF TUBERCULAR MENINGITIS.—M. Dujardin-Beaumetz reports (*Le Progrès Méd.*, 1879, p. 208) the case of a man of 23 who had suffered with decided symptoms of intermittent meningitis. Sulphate of quinine was entirely without influence. For five days he had persistent cephalalgia, which appeared about to usher in an attack of typhoid fever, coma followed, and from the sixth to the tenth day the symptoms of tubercular meningitis, notwithstanding which the man recovered. The patient's antecedents were very unfavorable to this result, his father and mother having both died with phthisis. Examination of the eye-ground had shown exudation with tuberculous granulations. The treatment consisted in blisters, calomel, and ice to the head. M. Beaumetz's paper was read before the Société Médicale des Hôpitaux, and several other cases were brought forward by members showing a similar arrest of the disease in question.

PURGATIVE ACTION OF OLEUM RICINI.—At a recent meeting of the Société de Thérapeutique (*Bull. Gén. de Thérap.*, 1879, p. 139), M. Constantine Paul stated that he had recently made a number of experiments to ascertain the quantity of ol. ricini necessary to obtain purgative effects; the dose varies from 4 to 30 grammes (℥i ad ℥i); on the other hand, a few seeds of the plant are sufficient to occasion symptoms of cholera. It seems likely, therefore, that the seeds contain some purgative principle which is not present in the oil. M. Vigier, in reply to M. Paul, stated that the active principle is in the tegument of the seed, 50 centigrammes (7½ grains) being sufficient to purge violently. M. Labee remarked that since the introduction of Hunyadi-Janos mineral water, castor oil had not been used to the same extent. Nevertheless, in certain cases, as *embarras gastrique*, for example, salines fail to produce a good effect, and the oil is preferable. M. Limousin spoke of the administration of the oil in capsules. These are about the size of a pigeon's egg, and are made of equal parts of gelatin and glycerin, so that they are quite flexible and can readily be swallowed.

FATTY EMBOLISM.—Prof. Richet reports the following case (*Le Mouvement Méd.*, 1879, p. 77). A roofer had fallen from a height, fracturing both femurs, the right seriously wounded, and with the entry of air into the tissues. On examination, the blood flowing from the wound appeared covered with drops of oil, showing rupture of the medullary canal of the femur with communication with the wound. Various other fractures had occurred. The extremities were cold, as was also the entire left arm, although no injury had occurred in this limb. There was a total absence of pulse. Although shock would suffice to account for the coldness, yet there was reason to believe in the existence of fatty embolism. Microscopic examination of the blood, previously treated with osmic acid, which, as is known, colors fatty matter but does not color any of the normal constituents of the blood, showed the presence of oil-globules. These were very numerous in the femoral vein, much less so in the pulmonary vein. The man succumbed to asphyxia. Prof. Richet believes fatty embolism to be closely connected with other forms of absorption of more or less septic fluids by the veins. He also refers to the thesis of Théodore Flournoy, of Strasbourg, published last year, in which ten cases of fatty embolism are reported.

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**RUSH MEDICAL COLLEGE.** — **Dr. James Nevins Hyde has been made Professor of Dermatology and Venereal Diseases in Rush College, and Dr. John E. Owens has received the appointment of Professor of Orthopædic Surgery in the same institution. Both chairs are now for the first time established in the regular course of this college.**

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, APRIL 12, 1879.

## EDITORIAL.

### CONTAGIOUS DISEASE IN EVERY-DAY LIFE.

AMONG the duties of the medical profession to the general public, none is more important than that of warning against the approach of diseases whose very existence, perhaps, may be unknown to those whose life and health are threatened. Aside from destructive and mortal epidemic disease, there are various affections of a serious though not necessarily fatal character, against the occurrence and spread of which precaution should be taken. Among these is syphilis, a disease which is on the increase in this country, and which, owing to the insidious and apparently innocent nature of some of its lesions, may be spread about among the ignorant or unsuspicious without a thought of its character and consequences. It is not putting the matter too strongly to assert that a considerable proportion of the cases of syphilis occurring in this community originate from secondary lesions of the mouth and lips. Epidemics of syphilis have been reported in foreign journals as originating in a blowpipe used in common by the workmen of a glass-factory; and the disease has been conveyed by instruments, as the Eustachian catheter used by physicians, or in dentistry. Last year Drs. Maury and Dulles, of this city, reported a series of twenty-two cases of syphilis inoculated through the practice of tattooing. All these cases show how easily the virus can be conveyed from the mouth of the infected person to various localities upon the victim, and should teach us not only to be constantly on the lookout for such sources of infection, but especially to warn our patients—of course, without going into detail—against the dangers of contagion in the multifarious contacts of daily life. Any one who goes down Chestnut Street may see the venders of children's toys, such as whistles, expansible balloons, etc., demonstrating the mechanism of their wares by putting them into not very cleanly mouths, and then handing them over to the buyer. Gallipe, in the current number of the *Annales d'Hygiène*, says that he knew of one such vender who was suffering with mucous patches while plying his vocation. A working-man, a car-conductor, or what not, suffering from mucous patches, is not going to give up his livelihood for fear of giving rise to and spreading contagion. Women and children, as well as men, are exposed in a thousand ways to the dangers of disease in their daily coming and going. The only way to avoid danger from this source is to inculcate cleanliness and caution. Urge the not too fastidious patient never to put coins in the mouth, nor to handle public railings, seats, etc., with ungloved hand; or, if this cannot be prevented, at least never to put the hands near the mouth without having just previously washed them. Nurses should under no circumstances let strangers or even non-relations kiss the children under their charge. The freedom with which our children are occasionally offered to the endearments of Bridget's casual acquaintances, male and female, is alone revolting; but when the extreme danger of such contact is considered, it may well be thought not out of the physician's province to give timely warning.

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FIFTY years ago there were eight medical journals in the United States. Now there are fifty-three of the regular school, nine homœopathic, and seven eclectic. In the last fifty years, sixteen hundred and thirty regular journals and two hundred and fourteen homœopathic have been started, leaving about six per cent. of the former and four per cent. of the latter class as survivors.

## CORRESPONDENCE.

### LONDON LETTER.

"A LENTEN FAST" is used as an expression conveying the idea of a very strict regimen. Of all the fasts of the early Christian Church, that of Lent was by far the most rigorous. It is not, however, as a Church ordinance that a Lenten fast is now being considered, but as a hygienic arrangement. A review of its history as a Church ordinance, however, will enable us all the better to understand it in its other relationships. The fast of Lent—the Saxon for spring—was at first a voluntary affair, not incumbent upon all. Fasting is a common Eastern custom, in vogue among Jews and Mohammedans as well as among Christians. At first the fast was observed for but forty hours, but it increased gradually to thirty-six days, where it remained till Gregory the Great made it forty days, in direct imitation of Christ's forty days' fast in the wilderness. At first the fast was but abstinence from flesh and wine, up to the fourth century; but they waxed more rigorous under the Innocents. The Greeks abstained from fish, as well as meat and wine, during the spring fast. The usual dietary consisted of herbs, roots, dried fruits, and nuts. In the mild climate of the littoral of the Mediterranean probably little real suffering was entailed by such a fast, even when prolonged to forty days; but when Christianity spread inward over the continent of Europe, the fast of Lent became a very serious affair, especially for invalids. So long as milk and eggs were allowed, the fast did not press unduly upon the delicate and the sick; but when these became forbidden, much suffering must have been entailed. The austere regimen which was voluntarily submitted to by an early Christian at Antioch, without much self-denial being required, became a very grave matter for an invalid at Treves, when "the fatal gift of Constantine" had made Christianity the religion of the empire and the Church ordinances had become the rule for all. The Church, ever watchful of its temporal interests, increased the severity of its fasts, in order to increase the sale of dispensations and indulgences. Thus, the handsome bridge at Dresden was built with money raised by the sale of permissions to eat eggs and milk in Lent.

In order to comprehend how the spring fast became a salutary arrangement, we must review the condition of the people in the Middle Ages. There were no tinned vegetables then; Raleigh had not found out potatoes; and the vegetable food available for winter was scanty in amount and little varied in character. A small quantity of apples and onions, and a few coarse winter-greens in some sheltered nook, rarely found elsewhere than in the monastery garden, were the only vegetable food available; and the German sauerkraut and the Slavonic pickled gherkins were very necessary articles of diet. Corn and pulses, of course, could be stored in any quantity, but then they do not contain the principles—be they what they may—which ward off scurvy. The ordinary dietary of the people was salted meat boiled with balls of ground corn, flour, or oatmeal. On the approach of winter, the fattest cattle were slaughtered and salted, while the others were turned out on to the great open plains, to find their own food, or to starve, as the case might be, and according to the severity of the weather. Only among the affluent were cows kept during the winter; and fowls do not lay many eggs during the frosts of December and January. The only fresh meat procurable during the winter months was that of the pig; and a curious custom is connected therewith. Alike amidst our Northern hills and on the slopes of the Carpathian Mountains obtains the practice of giving away a very considerable portion of each pig killed. Whenever the pig was slaughtered, a certain portion of the fresh meat was given to a limited number of neighbors, who in their turn sent round so much of their pig when it was killed. This circle is still described, in the North of England, as the "neighbor row," and even during lapses of friendship the customary reciprocal gifts are sent and accepted. By such an arrangement a certain, if limited, supply of fresh meat was furnished during the long winter months, when "Jack Frost" laid his hand heavily and persistently on undrained lands and forests.

Such were the conditions of life where the pig was an article of food. In Scotland, where there exists an Israelitish prejudice against the unclean beast, other devices and practices were entailed. When the long use of salted provisions was telling upon the mediæval Scots, they used to turn out and hunt their cattle, driving them into the enclosures once more, and then they used to bleed them. Having done this, they again turned out the unfortunate cattle, with their thinned blood, to face the wintry blasts. However hard this may seem on the cattle, the blood so procured was a boon to the people. The blood as it flowed was well whipped to deprive it of its fibrin, and then was mixed with fat, seasoning, oatmeal, or groats; after which it was put in the oven and baked, coming out as a savory blood-pudding. By means of this blood-pudding a substitute for fresh meat was furnished, the blood-salts of the vegetable-fed ox being so transferred to man. A similar pudding was made from the blood of each pig killed, and also every goose. In the North, the giblet-pie always contains the skin of the goose's neck stuffed with blood and seasoning. The goose and the pig are both animals easily fed in winter, while the ox entailed a store of hay, and the sheep was decidedly troublesome.

With such a dietary, eked out with apples, the people passed the winter. During early centuries, before the introduction of the potato, the apple was sedulously cultivated, and each homestead had its orchard, well stocked with various kinds of apples, especially those that kept well through winter,—hard, thick-skinned, sour apples, that would keep till Easter.

The consequence of such a dietary was that the people suffered severely from skin diseases of scorbutic character,—land-scurvy, in fact. Such skin disease is quite common among the Cumbrian hills, where in many farm-houses, up to a period I can well remember, salted meat was regularly eaten through the winter. The severity of the weather and the state of the roads interfere with the periodic visits of the peripatetic butcher, and the farmsteading had to be provisioned accordingly. Salt meat, boiled bacon, and pease pudding; cheese and oat-cake; bread made from "mashelton," —that is, wheat, barley, and rye, all grown together and ground together,—such was the staple of the food during winter. Skin disease became prevalent during the months of early spring, and the fast of Lent doubtless saved much disease. Few fish are fit to eat in winter, while the ice which bound the rivers in winter disappears in spring, and thus the river furnished some food; but probably the poor saw little of the river-supply of food.

Early vegetables, therefore, were eagerly sought for, and are still sought for, by persons who concern themselves little with Lent as a Church ordinance. In the North, where winters are long, it is customary to seek for a species of wild spinach, called "Easter ledges," and with it, the young shoots of the nettle, and any other innocuous vegetable leaves, they make a pudding. The broad-leaved, dark, wild spinach grows in orchards and sheltered meadows, in small patches, and might still be cultivated with advantage. These vegetables are carefully picked and washed, and then thoroughly chopped up; some barley is then added, and the whole is put into a bag and boiled with the meat in the pot. This brownish-green mass, called a "herb-pudding," is far from an unpalatable dish, and is even better warmed up the second day. Such a vegetable dietary was of the greatest service in freeing persons afflicted with scorbutic affections from their maladies. It is still regularly eaten by old-fashioned people, who attribute to it potent anti-scorbutic qualities, and who hold the antiquated pathology that "the blood changes in spring and autumn." Such persons used to be regularly bled at these times of the year, and in the days of bleeding, when the apprentices got all the fees (a shilling) for bleeding for themselves, it is needless to say the profession fostered the convenient pathology. It was quite customary to call at the doctor's, on Sunday morning, to be bled before going to church. Whether the bleeding was salutary or not, there is no doubt that the herb-pudding was. Milk and eggs begin to be plentiful during Lent, and by their use, with the vegetable food just described, our mediæval ancestors managed to cure their cutaneous maladies.

The condition of the mass of the population at the end of the winter must have closely resembled that of Anson's crews when afflicted with scurvy. Indeed, the nomenclature of skin diseases then was very simple; all were scurvy, to which the adjective "dry" or "wet" was prefixed, according to circumstances. Consequently, we see that the fast of Lent, by doing away with the use of salted meat, was of great value from a prophylactic point of view. The salt fish and egg-sauce, now fashionable in Lent, is merely a matter of religious feeling, for, except in certain localities, salt fish must have been rarely met with. From a hygienic point of view, salt fish is about as objectionable as salt meat. Of course the introduction of the potato revolutionized the winter dietary, and, where it was freely used, scorbutic affections were comparatively rare. Recently the turnip and the carrot have been added to the winter dietary, and the fast of Lent is becoming a religious ceremony almost entirely. But it had its value up to a very recent period; and the regulations of the Church as to the great fast of Lent were in so far salutary that they prevented a great deal of disease otherwise scarcely avoidable, and probably in other cases cured persons of their scorbutic affections, the outcomes of their winter dietary.

In a recent letter I reviewed the subject of the premurmuric stage of *valvulitis*, and since then a very instructive heart has fallen into my hands. One evening a groom left at my house a most enormous heart, merely saying that it was a horse's heart, from a well-known veterinarian. No means of weighing the bulky thing existed, but it filled a very large pot, and was as large as a big human head. No history of the animal could be procured, unfortunately, but heart disease had been diagnosed in life, and when the animal died, and this enormous heart was found, it was sent on to me. The ventricles were full of blood; the right side of the heart was little enlarged, and the pulmonary and tricuspid valves were healthy. The massive left ventricle was in diastole, and filled with blood-clots. The mitral valves were apparently free from disease, but the aortic valve-cusps were evidently diseased. The semilunar valves of the heart of the horse are transparent and thin, and consist merely of the two folds of endocardium, without apparently any fibrous structure. How they sustain the strain to which they are constantly exposed is a source of wonder to me. Here the aortic valves were obviously thickened, and somewhat shrivelled, one valve being in a more advanced condi-

tion of disease than the other two. There was but one coronary artery. At first the case seemed to be one of massive hypertrophy consequent upon aortic regurgitation, for the walls of the left ventricle were at least an inch and a half in thickness. Such, however, was not the case, and the explanation is not so simple, for on testing the valves they were found still to be perfectly competent, though distinctly diseased. The massive hypertrophy was not due to aortic regurgitation, but to some other cause, and the aortic disease was but a part of the morbid process. The aorta was enormously thickened, and there were upon it, about two inches above the valves, two spots of commencing atheroma, each about three-quarters of an inch across. The hypothesis which suggests itself is as follows: it was a case of Bright's disease, with those changes in the vascular system which are known to result therefrom. There is contraction in the arterioles, with obstruction to the blood-flow; high arterial tension, and consequent hypertrophy of the left ventricle. The muscular wall of the arterioles also becomes hypertrophied in time, so that, betwixt them and the hypertrophied left ventricle, the blood-pressure within the arteries is maintained at an abnormal height, and this over-distention of the arteries leads to atheroma in them by a slow chronic process. The aortic valves are closed with abnormal force, and they too become implicated in the morbid process. If the kidneys of this horse could have been obtained, or had any history of its being ill and having passed bloody urine —a common malady in horses—been procurable, the hypothesis could probably be substantiated.

The lessons taught by this case are these. The hypertrophy of the left ventricle is not subsequent to and resultant from the valve-lesion; it exists cotemporaneously with it, is to some extent precedent to the valve-lesion, and is even causally related to it. When we discover valvular disease in the heart, we almost universally regard the muscular changes as subsequent and consequential only, and entirely forget that some of the muscular change has preceded the valve change. Of course in mitral disease the result of acute valvulitis the muscular changes are entirely secondary to and subsequent upon the valve disease; but in the sclerotic or contracting form of mitral disease, the chronic form found in middle-aged and elderly persons, the valvulitis is the consequence of the strain put upon the valve-curtains in the systole of the powerful hypertrophied left ventricle,—found in chronic Bright's disease. Then, too, we see that aortic valvulitis is commonly not a disease *per se*, and the valvular changes the commencement of the patient's troubles; but, far from this, the inflammation of the aortic valves is one of the later outcomes of a wide-spread morbid process, viz., a long and persistent high blood-pressure in the arteries from the hypertrophy of the two muscular ends of the arterial system,—the central left ventricle and the peripheral arterioles. This is a condition which is very common, but, as fragments of it are usually described as distinct entities and separate diseases, we have yet to learn to see the great pathological whole whose fragments, as the prominent apparent malady, will piece together and put together until we can erect the whole morbid process, and see how heart-changes—first muscular, then valvular, and then muscular again; true apoplexy from arterial rupture; atheroma from persistent over-distention of the arterial system; and angina pectoris (acute over-distention of the cardiac cavities)—are all linked together intimately as outcomes of a pathological condition which stands in a causal relationship to them all. We also see that the same pathological conditions of the heart are found in the horse as are found in man; and the changes in the vascular system of old horses which have always been highly fed ought to attract the attention of medical men more than they have hitherto done.

J. Milner Fothergill.

## PROCEEDINGS OF SOCIETIES.

### PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Thursday Evening, January 23, 1879.

The President, Dr. H. Lenox Hodge, in the chair.

(Continued from page 317.)

*Enormous aneurism of thoracic aorta.*

Dr. William Pepper, who had examined the patient during life, presented the specimens, with the following history, for Dr. William Savery, of Bryn Mawr:

He was 46 years old on the 22d of February last; by occupation a newspaper dealer, which business he has followed for many years on the line of the Pennsylvania Railroad.

From his boyhood he has been noted for feats of activity and endurance. His route extended as far as the town of Coatesville, and during the time when there were no Sunday trains on this road, it was his custom, in order to serve his patrons, to make an extra early start on the Sabbath, walk as far as the Paoli Hotel (nineteen miles) to breakfast, continue the journey up to Coatesville, distributing his papers on the way, dine there, and then walk back to the city in the afternoon, rising again the next morning at his usual hour, two o'clock, in order to reach the newspaper offices in good time to obtain his supplies.

Since I have known him, his constant habit of jumping on and off of trains in rapid motion has caused many a prediction among the pas-

sengers and officials that he would meet his death sooner or later from that cause. Within the past year, however, he has been more circumspect, feeling, no doubt, his growing inability to do as he used to, though very loath to acknowledge it.

About three months ago he came to my office for professional advice, complaining of a lump in his back, which was growing rapidly, and becoming more painful than it had been when he first noticed it, five months before. On examination I found a swelling as large as the head of a child three months old, occupying the left side and back part of the chest, rising just below the inferior angle of the scapula, and extending from the vertebral column to the edge of the trunk. There was at this time no discoloration of the skin, and nothing in the appearance of the swelling to indicate positively its character.

But upon applying the hand to it there was a very decided thrill noticeable, and by the ear a further proof of its aneurismal nature was found in the characteristic murmur accompanying every beat of the heart. The facial expression of the patient was indicative of constant suffering, which a feeling of pride prompted him to conceal as much as possible. I prescribed a steady course of tincture of digitalis and tincture of iron, in moderate doses, with the use of anodynes at night to procure rest when necessary.

I also strongly advised him to change his occupation, or to abandon his present one, as the constant exertion and excitement incident to such a life must be injurious. This advice he declined to take, and continued to serve his papers until within about ten days of his death, when increasing suffering and weakness compelled him to remain in his room. In the interval I saw him a number of times, either at my office or at his own home, and found that the tumor increased rapidly in size.

The patient died quietly during sleep, on the night of the 29th ultimo, and I made the autopsy on the following evening, assisted by Drs. Hill and Smith, of Ardmore.

The body was considerably emaciated. The girth around the chest at most prominent part of tumor was forty-one and a half inches.

*Heart* appeared to be somewhat dilated, its color pale; the internal structure and condition not examined, as I knew you would be interested in seeing it opened, and therefore left it.

*Lungs* healthy; the left one considerably compressed and pushed upwards by the presence of the tumor below it; but on being removed from the chest its tissue seemed quite crepitant throughout.

*Liver.*—Natural in color and consistence; rather large, its weight being fully four pounds.

*Spleen.*—Normal in size and structure.

*Kidneys.*—Apparently perfect, except that the left one was adherent by a considerable portion of its capsule to the lower surface of the tumor.

*Stomach, intestines, pancreas, etc.*, all of natural appearance.

*Aorta* apparently sound till its descending portion reached the fourth dorsal vertebra, where it had dilated upon the right side, forming a small tumor about the size of a hen's egg, firmly adherent to the vertebra; this was filled with a soft clot.

Lower down, about opposite the eighth dorsal vertebra, the aortic wall had given way again, forming the main tumor, which occupied the left side, extending from a point opposite the seventh rib to the kidney.

This was full of coagula, and so adherent to the vertebræ and ribs that it was impossible to remove it without tearing its walls to an extent that quite changes its appearance. About three pints of liquid blood were removed from the thoracic cavity, before displacing the tumor, but whether this had been an antemortem effusion from a rupture of the sac on its posterior surface, or was produced during the examination, it was difficult to determine.

The ninth, tenth, eleventh, and twelfth ribs were very much diseased, the first-named being separated about two inches from its articulation with the spine, and the others had almost disappeared from absorption and pressure by the tumor; also the corresponding vertebræ were extensively necrosed, as the specimens will show. The ninth rib continues adherent to the tumor.

The patient had syphilis in a severe form a number of years ago, which probably accounts for the origin of the fatal lesion.

*Aneurism of the ascending portion of the thoracic aorta, from a case treated by rest and a restricted diet.* Presented by Dr. LOUIS STARR.

James ——, æt. 41 years, a blacksmith by occupation, of temperate habits, was admitted to the medical ward of the Episcopal Hospital on November 2, 1877. His family history was healthy. He denied ever having had venereal disease, but his statements in this respect were rather confused and probably incorrect. His health had been good until about five months before his application at the hospital, when, while working in his shop, he accidentally misplaced a heavy bar of iron, which, in falling, struck him across the breast, with a force almost sufficient to knock him down. Although none of the ribs were broken by the blow, the soft parts were considerably bruised, and he was obliged to rest for two days. Upon resuming work he began to suffer from pain, of a neuralgic character, in the upper part of the right chest, gradually becoming more severe; and six weeks later he noticed a projection of the chest-wall beneath the right clavicle, and an unnatural beating in the same position. Both

the pulsation and the pain were greatly augmented by exertion, and this also caused paroxysms of coughing and dyspnœa; for this reason, as well as on account of failing strength, he was soon obliged to give up work entirely. While he remained quiet he was comparatively comfortable, but the tumor steadily increased in size up to two weeks before he came under observation, when it seemed to stop growing.

When admitted he was weak, though in good condition as regards flesh. The eyes were suffused, the lips purple, the face dusky-red in color, the hands livid and cool, and the external jugular veins, and the superficial veins of the hands and arms, dilated and prominent. At the upper anterior portion of the right chest there was a hemispherical aneurismal tumor, measuring seven and a quarter inches transversely and eight inches in a vertical direction. The acromial extremity of the right clavicle was about an inch higher than the left, and the tumor extended from the lower edge of the bone to the fourth rib, and from the middle of the sternum to the margin of the axilla. The anterior portions of the second and third ribs at the site of the aneurism could not be felt, having evidently been eroded. The investing integument was tense, but unaltered in temperature and color. There was visible pulsation. The aneurism was firm and elastic and painless to the touch, the wall in the most prominent position was extremely thin, as if composed of little more than the skin, and a double impulse was felt, the more forcible stroke being synchronous with the cardiac impulse and attended by a uniform expansion of the sac. On auscultation two sounds were heard similar to, but louder than, those of the heart. Neither thrill nor murmur could be discovered. Percussion was dull over the whole surface of the upper third of the right chest, the liver dulness began at the usual level, and between these two regions of dulness there was a narrow band of impaired pulmonary resonance. Vesicular murmur and vocal resonance and fremitus were abolished over the upper area of dulness. The respiration on the left side was puerile. The apex-beat of the heart was situated in the fifth interspace, directly under the left nipple; there was no valvular murmur. The patient complained of occasional giddiness, and of a sense of distention and dull pain in the tumor. The respiratory movements were increased in frequency, and he had paroxysms of dyspnœa and ringing, unproductive cough. The pulse was equal in both radial arteries, and was feeble and moderately frequent,—about 100 per minute. His tongue was lightly coated, his appetite poor, and his bowels constipated. His pupils were equal, there was no hoarseness or dysphagia, and the urine was normal.

Under treatment his condition improved considerably, the giddiness and the cough and dyspnœa disappearing, the complexion becoming more natural, and the circulation slower. There was, too, less pain and pulsation in the aneurism, and on manipulation there was a feeling of increasing solidity. The improvement continued until January 15, 1878, when, without any apparent cause, the symptoms of internal hemorrhage set in, and death followed in about four hours.

*Inspection.*—On opening the thoracic cavity a large quantity of recently-coagulated blood was found in the right pleural sac. The blood had escaped from a ragged opening, large enough to admit the point of the index finger, in the lower part of the aneurism, and completely filled the space between it and the liver, compressing the lower lobes of the lung against the spine, and forcing the liver an inch or more downwards. The aneurism sprang from the convexity of the ascending aorta, was globular in shape, and occupied nearly the whole of the superior third of the right chest cavity, the portion in the interior of the thorax being equal in bulk to that on the exterior. The wall immediately about the position of rupture was very thin, and composed of little more than the reflected pleura; the remainder of the sac was moderately thick, and was formed by the distended arterial coats. The external wall was covered by the attenuated pectoral muscles and a layer of adipose tissue, both the wall and its coverings being thinnest at the most prominent point. The interior of the aneurismal sac was rough, and its cavity was occupied by a large, firm, non-adherent clot. This clot was laminated, the external layer was soft and recently formed, and upon the outer surface there were several small pieces of eroded bone. The lower edge of the first rib, the right border of the first piece of the sternum, the upper margin of the fourth rib, and both the sternal and vertebral extremities of the eroded second and third ribs projected into the cavity and were devoid of periosteum and roughened. The orifice of the aneurism was oval in outline, two inches and a half in length by an inch and a half in width, and was situated about an inch above the aortic valve. The aorta was atheromatous and somewhat dilated. The heart was small, the edges of the mitral leaflets were slightly thickened, and the aortic leaflets were less flexible than usual; the other valves were healthy.

The upper lobe of the right lung was compressed between the posterior part of the aneurism and the thoracic wall; it was adherent to the former and contained several isolated collections of caseous material. The middle and lower lobes were also compressed, though to a less degree. The pleura was opaque and thickened.

The left lung presented nothing abnormal, except a few old pleuritic adhesions. The

aneurism pressed upon and partially obstructed the superior vena cava, the right pulmonary artery, and the right bronchus; the rings of the latter were bent inward, and the interior of the tube contrasted markedly with that of the opposite side.

There was no disease of the abdominal viscera.

An interesting feature of this specimen is the firmness and size of the clot, which, though unattached to the sac, so nearly fills it that the blood in flowing through the aneurism must have spread out into a thin, broad layer. Now, although in order to effect a cure the deposit of fibrin should have been *upon* the interior of the sac and not *free* in its cavity, the presence of such an amount of fibrin shows an effort in the right direction, that in a less hopeless case might have been successful. This effort I cannot but attribute, in part at least, to the treatment adopted, viz., absolute rest in bed, and a restricted diet, medicines being used only to regulate the bowels, and upon one or two occasions to induce sleep.

Rest, the main factor in the treatment, favors the deposition of fibrin chiefly by slowing the heart's action. That it is really a therapeutic agent of importance may be judged from a case reported by Tufnell, in which the pulse when standing and in ordinary exercise was 96 per minute, after lying horizontally for a time 66, a fall of thirty beats per minute, and supposing the patient to have remained in bed, under ordinary circumstances, twelve hours out of the twenty-four, a difference during complete rest of 21,600 pulsations a day,—a reduction of great consequence. In my case the reduction was not more than twelve beats a minute, probably because of the impossibility of maintaining anything more than a semi-recumbent position.

The object of a restricted diet is to reduce the quantity of the blood without impairing its quality, so that while over-distention of the aneurismal sac is avoided, the conditions favorable for fibrinization are preserved. The same results cannot be obtained by the old methods advocated by Valsalva, either venesection or venesection combined with starvation: on the contrary, each of these methods of treatment would produce an anæmic condition, reduce the fibrin, and tend to quicken the circulation.

The quantity of food served in the present case was estimated by weight and measure, as follows. For breakfast, two ounces of bread and four fluidounces of milk. For dinner, four ounces of meat (beef or mutton), three ounces of bread or potatoes, and four fluidounces of water or "rice and milk." For supper, two ounces of bread and six fluidounces of milk. The aggregate, eleven ounces of solid and fourteen ounces of liquid food, would seem to be a very small allowance, were it not for the other element of the treatment, much less food being necessary in a perfectly passive state of the system than during active life. The patient complained a little at first of the restraint and enforced abstinence, but was soon reconciled by the great improvement in the symptoms.

Tufnell* records nine cases of aortic aneurism treated in this way, in all of which, after an average course of about eleven weeks, a marked improvement or an apparently perfect cure resulted.

*Tumor in right lobe of cerebellum.* Presented by Dr. L. S. CLARK, for Dr. A. S. GERHARD.

Rosina M., German, æt. 20 years, single; never been pregnant; housework; no previous disease except those incident to infancy and childhood in the usual form; no mechanical injury; father died of smallpox eight years ago; mother living and healthy; two brothers—one older, the other younger—died of pulmonary tuberculosis within six weeks preceding her own death; no hereditary tendency to disease in the family as far as memory reaches back, all the ancestors living to a good old age; uncles, aunts, and cousins are healthy; grandparents, both paternal and maternal, still living; three brothers, all younger, still living and healthy; died, April 25, of exhaustion due mainly to long-continued and intense pain in the head.

About the 1st of December, 1877, this "headache" first made its appearance, for which she was treated under the direction of Dr. H. W. Newcomet. On March 18, 1878, she passed into my hands, when she presented the following symptoms: bedfast, but able to help herself; decubitus right side; complexion fair; very pale; emaciation and bodily weakness *rather* considerable; skin moist, its temperature the same in both axillæ, varying from 100° to 102½°; slight and loose cough, with but little expectoration of light greenish and consistent sputa; thoracic pain none, except the last few days of life; and, indeed, no general pain; percussion showed marked dulness over apices of both lungs, and auscultation revealed moist râles over the apex of the left, and bronchial breathing over that of the right lung; menstruation suspended for two months; appetite generally good, and digestion regular and normal; no hectic nor colliquative sweating, *except during the paroxysms of headache;* sweats cold and clammy; no œdema; no diarrhœa; occasionally vomiting, but only upon a full stomach and at beginning of a paroxysm of headache; heart-sounds indicating no organic disease; pulse varying from 120 to 130 per minute; no impairment of intellect; no paralysis; no convulsions nor any want of muscular co-ordination whatever. During the last few days, however, her face (during the paroxysms only) would be drawn

* The Successful Treatment of Internal Aneurism, etc. London, 1875.

towards the *left* side, whether from muscular contraction on that side, or from relaxation of the facial muscles on the opposite side, I have not determined; and this was accompanied by a rigid drawing backward of the head, by pain in the left shoulder and arm, and by a marked determination of sensation (not of motion) in the same shoulder and arm. The pain in her head was simply excruciating, at first involving the whole cranium, afterwards only the forehead and temples, but finally only the back of the head and nape of the neck. The pain in its character, as long as the paroxysm lasted, was constant, acute, without intermission; she was in fact not able to describe the precise characteristics of the pain. The paroxysms of pain recurred at something like regular intervals: at first, *Friday* was her "bad day," being comparatively free from pain during the rest of the week. Then for a period of two weeks (from March 23 to April 6) she was completely relieved, taking $\frac{1}{50}$ grain doses of phosphorus three times a day, along with strychnine, quinine, and bromide of iron. From the latter date on she had a paroxysm either daily or every other day, generally from 8 to 12 o'clock A.M., until the last two days, when there was no intermission, when she died of sheer exhaustion. None of the many medicines given were of any avail in stopping the pain in the head.

The post-mortem, made ten hours after death by Drs. Leonardo S. Clark, H. W. Newcomet, and myself, revealed tubercles in the apices of both lungs, those in left softening, with a well-marked vomica and extensive pleuritic adhesions, and the right indurated. A very small heart. An enlarged and slightly fatty liver. A biliary calculus the size of a common cherry in the gall-bladder. The cerebrum was slightly softened, its arachnoid much congested, with an *appearance* merely of purulent matter underneath, and about the normal amount of serum in its ventricles. The cerebellum was normal as to appearance, the two lobes alike as to size, but the *right* lobe containing the tumor herewith respectfully submitted for examination; but, contrary to my full expectation, no apparent trace of tubercle in any part of the brain, unless the accompanying tumor be tubercular.

*Report of the Committee on Morbid Growths.*—"The tumor from the brain, presented by Dr. Clark and referred for examination, is found histologically to consist of numerous lymphoid cells in various stages of granular degeneration. Between the cells is seen a very indistinct, reticular, connective tissue. A transverse section of the blood-vessels shows their walls to be infiltrated with lymphoid cells, and their lumen containing the débris of blood-elements and cells, completely obliterating the vessels. The new formation is a tuberculous growth.

"February 13, 1879."

## REVIEWS AND BOOK NOTICES.

PRESCRIPTION-WRITING. Designed for the Use of Medical Students who have never studied Latin. By FREDERIC HENRY GERRISH, M.D. Second Edition. Portland, Me., Loring, Short & Harmon. Philadelphia, J. B. Lippincott & Co., 1878. 16mo, pp. 51.

A MANUAL OF PRESCRIPTION-WRITING, ETC. By MATTHEW D. MANN, A.M., M.D. New York, G. P. Putnam's Sons, 1878. 16mo, pp. 155.

These two admirable little books are in some sort complemental to each other. Dr. Gerrish's book, which has been already appreciated to the extent of reaching a second edition, is divided into two parts. The first gives rules for writing prescriptions, including tables of declension; in the second part are collected the Latin words which are used in naming the drugs and preparations of the United States Pharmacopœia and such unofficinal medicinal articles as are extensively ordered in prescriptions; also other words which are necessary or convenient in prescription. Dr. Gerrish's object is limited, but within the limits his book is perfectly clear and very satisfactory. Dr. Mann has aimed at something a little different. Besides giving an explanation of the methods of correctly writing prescriptions, he gives a very full and satisfactory table of doses, expressed in both the apothecaries' and metric systems; rules for avoiding incompatibilities and for combining medicines, etc. To the student or practitioner thoroughly conversant with the principles of pharmacy, but ignorant of Latin, the first of these manuals would be sufficient; for the same individual understanding Latin, but weak in pharmacy, the second would be preferable. One would be safe in having both, and sure of getting much useful information in a handy form.

THE CROONIAN LECTURES ON CERTAIN POINTS CONNECTED WITH DIABETES. Delivered at the Royal College of Physicians. By F. W. PAVY, M.D., F.R.S., Fellow of the College, etc. 8vo, pp. 126. London, Churchill, 1878.

Dr. Pavy has taken the opportunity, in these lectures, to reiterate and further sustain the position he early took with regard to the sugar-forming function of the liver,—that such function does not exist during life; that the liver is rather a sugar-assimilating organ, the object of which is to work up the sugar and starch ingested and to prevent them from reaching the general circulation in quantity sufficient to render the urine appreciably saccharine; and that in diabetes the fault lies essentially in the passage of sugar into the general circulation in opposition to what ought to occur. In other words, in diabetes the as-

similative action of the liver is not properly exerted, and the sugar is allowed to pass into the general circulation, causing the urine to acquire a more or less saccharine character. Bernard, on the other hand, claimed that, independent of the sugar derived from the sugar and starch ingested, this substance is actually produced in the liver during life; that the liver is a true glycogenic or sugar-forming organ; that the sugar thus produced passes into the general circulation, and is oxidized in the systemic capillaries, chiefly in those of the muscles. Both Bernard and Pavy agree that in the liver there is produced an amyloid substance, for which the name zoamylin has been suggested. Dr. Pavy proposes that it be called *bernardin*. But, according to Bernard, it is an intermediate substance into which nitrogenous matter is converted on its way to form sugar; while, according to Pavy, it is a substance into which, in health, *sugar* is converted, and which is stored in the liver for future force production. Pavy also admits the conversion, to a degree, of nitrogenous matter into amyloid substance. In diabetes, either this conversion of sugar into amyloid matter does not take place, or the amyloid matter is reconverted into sugar, and as such enters the circulation, whence it is removed, in appreciable amounts, by the kidneys. Pavy considers the former as more likely.

It would be impossible to follow Dr. Pavy in his argument to sustain his position, but he asserts that Bernard's volumetric method of testing is fundamentally fallacious, and substitutes a gravimetric method of his own, in which there would appear to be no fallacy. This being admitted, his analyses, while they show the presence of a small amount of sugar in the blood, show no difference in the quantity in the arterial and venous fluid, and no more in the blood of the hepatic vein than in either, nor more in the living liver or the organ at the moment of death, than in the arterial or venous blood. After death, however, the amyloid substance in the liver is rapidly converted into sugar, in which, then, large amounts are found. Admitting no fallacy in his test and its application,—and we confess to finding none in a somewhat close examination,—his position would seem well sustained, so far as the glycogenic function of the liver is involved. Then he shows, experimentally, that an "imperfectly dearterialized" state of the blood causes glycosuria, probably by preventing the proper assimilation of the sugar in the liver; and thence reasons that a dilated state of the arteries, such as is necessary for this, is most likely to be produced by certain textural alterations in the brain.

Whatever may be the final settlement of this mooted subject, Dr. Pavy's last work contributes a vast amount of valuable information on the subject, and deserves the close study of the clinician as well as of the physiologist. J. T.

LECTURES ON BRIGHT'S DISEASE OF THE KIDNEYS. Delivered at the School of Medicine of Paris. By J. M. CHARCOT, Professor in the Faculty of Medicine of Paris, etc. Collected and published by Drs. Bourneville and Sevestre. Translated, with the permission of the author, by Henry B. Millard, M.D., A.M. 8vo, pp. 100. William Wood & Co., New York.

It is always interesting to read the views, on any subject, of a writer of recognized eminence, whether it be that on which his reputation has been founded or not. As such, the lectures of Charcot on Bright's disease will be welcomed by all medical readers. As might be expected, however, they contain no new contributions to the pathology or therapeutics of the subject, differing, in this respect, very greatly from the writings of the same author on the nervous system. The work presents a fair but not very full or accurate exposition of the pathology and symptoms of the conditions usually included under the term Bright's disease or diseases, such as we would expect to find in *reported* rather than carefully written lectures on the subject. The matter of treatment is not included.

Charcot adopts the view of *multiplicity* in the forms of Bright's disease, which he justly terms the English theory, in contradistinction to the older one of *unity*, or that which makes the different forms different stages of one affection. In this he agrees with modern pathologists generally. Beginning with an account of the normal histology of the kidney, tabular infarctions, including casts, are first considered in a general way. Less clinical significance is attached to casts than is usually done, and we think rather less than they deserve. The contracted kidney, the large white kidney, scarlatinous nephritis, and the amyloid kidney, are then considered.

The work of the translator is not always satisfactory, there being occasional obscurities in the translation. The drawings are coarse, and the general impression on the careful reader is that of somewhat hasty book-making. J. T.

STUDIES IN PATHOLOGICAL ANATOMY. By FRANCIS DELAFIELD, M.D., Adjunct Professor of Pathology and Practical Medicine in the College of Physicians and Surgeons, New York. Fasciculus No. 5, June, 1878. William Wood & Co.

Parts 1, 2, 3, and 4 of this series of studies were noticed in the number of this journal for October 26, 1878. The present part includes Hydrothorax, Chronic Pleurisy with adhesions, the Pleurisy of Chronic Phthisis, and Tubercular Pleurisy, with three plates, showing the alterations in the pleural endothelium in the first, second, and fourth of the conditions

named. The same excellence in the execution of the plates and the same care in description which characterized the former parts are maintained in the present, and if the series is continued, as we hope it may be, it will result in a most complete atlas of pathological histology, with descriptions of convenient length to be most useful to practitioners and teachers.

AN INTRODUCTION TO PATHOLOGY AND MORBID ANATOMY. By T. HENRY GREEN, M.D. Lond. Third American from the fourth revised and enlarged English edition. Philadelphia, Henry C. Lea, 1878.

An extended notice of the present edition of this now popular work on pathology is not required, in view of the fact that past editions have received full consideration. The author informs us that he has again added much new matter, with the object of making the work a complete guide for the student. All the chapters have been carefully revised, and a large addition has been made to the number of the wood-cuts. Among the additions is one on the "Muscular Changes in Typhoid Fever," with a cut; one on "Scrofulous Inflammation," with a cut; new matter and illustrations in the sections on "Syphilis," "Endocarditis," and "Phthisis." The book has deservedly earned an acknowledged position among the text-books on pathology.

PHYSIOLOGY: PRELIMINARY-COURSE LECTURES. By JAMES T. WHITTAKER, M.A., M.D., Professor, etc. Illustrated. Cincinnati, Chancy R. Murry, 1879.

A small book in octavo form, two hundred and eighty-two pages, containing lectures "on the foundation facts and principles upon which physiology is built." The students of the Medical College of Ohio can be content if all their teachers give proof of the same deep and manifold study as these lectures, delivered during the preliminary course, are evidence of. Hypocrisy and superstition would soon disappear, and the medical profession in our great country would be in every respect the advance-guard of civilization, if it were possible to promulgate the study of physiology and to omit nothing it teaches. "The exhibition of life is no more due to an innate principle, a separate essence, a quid intus, than is the registry of time in a clock," are words that give us an idea on what scientific basis the author wishes the modern physician to stand. "It is no answer whatever to say that life is creation. Such an assertion may satisfy the wants of the emotions, but it will in no way appease the demands of the intellect trained, by cultivation in physical science, to entirely ignore unnatural explanations for natural events." We know a lecturer on physiology in a large medical school who would tremble to utter such words, less yet put them in print. The author's description of the influence of physiology on practice and practitioners; his almost poetical rendering of the conservation and correlation of force; the origin and evolution of life and its forms, wherein he follows Darwin; and his masterly lectures on protoplasm and its properties, and on bone, muscle, nerves, and blood, form together a series of instructions which may not be only of value to the student of medicine, to give him a deeper inside view of the workshop of nature, but which should be read by every individual claiming classical modern education. There can be no doubt that, if the author somewhat differently arranged his book, to make it accessible to a larger circle of intelligent laymen, this volume, as well as its author, would soon be as favorably known, wherever the English tongue is spoken, as, for instance, the works of Bock, Buchner, and Moleschott are in Germany. We have never before seen, in the English language, a book on a subject connected with physiology, where so much is condensed into such a small space, and where, with a scholarly English, the rare facultas docendi is so effectively made use of. "Du sublime au ridicule il n'y a qu'un pas" is so frequently lost sight of in these condensed works on momentous questions, that they only should be written by a master-mind who thoroughly controls his subject.

The author cites, with the same facility, Jansen, Kant, Koerner, Molière, Shakspeare, and Schiller, with which he quotes Haller, Harvey, Haeckel, Kölliker, Tyndal, Schwann, Virchow, Carl Vogt, and Goethe, the latter in his double capacity as poet and naturalist. That he mentions, besides these names, many others well known in the history of biology, the reader can imagine from the nature of the subject. The work is made more interesting yet, by the author giving, of each different subject he speaks of, a history of its evolution; *i.e.*, he follows up the gradual development of each theory from its beginning to its present condition. The latest achievements of comparative embryology are noted and made more apparent by well-executed drawings. We heartily recommend our readers to add this small but valuable book to their library, and are only sorry that want of space forbids us to give a larger abstract from it. H. E.

## GLEANINGS FROM EXCHANGES.

INVOLUNTARY ROTATION OF THE HEAD CURED BY CONTINUED PRESSURE ON THE NECK.—Dr. Heaton (*British Medical Journal*, February 15, 1879) had under his care a healthy woman of 22, who, after having been overworked at one period four years previously, began to have tremors, affecting the head and right arm. Blisters on each side of the spine caused the tremors to cease during

six months; then the movements began again. When first seen by Dr. Heaton, her head rotated, when she was in the upright position, with about one hundred to-and-fro movements per minute, in regular time. She was quite unable to restrain this movement, except by supporting the head with her hand; firm pressure was required to keep the head at rest. When she lay down the movement ceased. No other unnatural movements existed. Conium, arsenic, and inunctions, with belladonna liniment, were employed in vain. One day it was discovered that firm pressure with the finger over a spot a little below and anterior to the root of the ear, immediately behind the angle of the jaw, had the effect of completely arresting the movement. Pressure on either side had the effect, but on the left was most efficient. An apparatus was subsequently contrived, consisting of a curved steel band fitting on the back of the neck, and having at each end a small pad resting upon one of the pressure-points, and of which the pressure could be regulated by a screw. This the patient could wear comfortably, and it was quite hidden by a neckerchief. By the end of two months the patient was well, and could discard the use of the apparatus. She had still, sometimes, twitchings in her eye and arm.

BROMINE IN LARYNGEAL CROUP.—Dr. W. Redenbacher (*British Medical Journal*, 1879, p. 234; from *Aerztliches Intelligenz-Blatt*), called to the case of two little girls, aged respectively 5 and 7, suffering with severe croup of the larynx and air-tubes, ordered a tablespoonful of the following mixture to be taken every hour:

℞ Decocti altheæ, f℥iv;
Potassii bromidi, ℥i;
Bromi, gr. ivss.;
Syrupi simplicis, f℥i.

On again visiting the patients, whom he did not expect to find alive, he was most agreeably surprised. The difficult breathing, dry hard cough, etc., had all disappeared; the breathing was free, and the cough loose; several portions of croupal membrane had been coughed up. Recovery followed, without toxic symptoms. For children under one year, the quantity of bromine in the mixture should be reduced to one grain and a half, and for those from one to four years old, to three grains.

EPIDEMIC QUINSY.—Dr. Grosholz (*British Medical Journal*, 1879, p. 76) describes this as follows. At the commencement, the patient complains of lassitude, pains in the limbs, slight shiverings, and disordered stomach. Marked fever sets in, with pricking in the throat and a propensity to hawking. The throat and tonsils are seen to be enlarged and inflamed, the redness extending over the pharynx and uvula. Yellowish-opaque spots, and sometimes even large patches, appear on the tonsils. These can easily be detached, and probably consist only of the accumulated secretion from the follicles. There is much tenderness under the jaw, and the salivary and adjacent lymphatic glands are generally swollen and painful. The tonsils do not become very greatly enlarged; they are of a deep-livid hue, glazed and shining. The temperature rises to 102° or even higher. Towards evening there is great restlessness, and sometimes delirium. The patient soon becomes weak and low, and the difficulty in swallowing tends to increase the prostration. The disease reaches its height on the fifth or sixth day, after which the patient gradually commences to improve. There is no crisis, and, as a rule, the tonsils do not suppurate. There are no sequelæ, except a slight weakness of the throat and tendency to take cold.

The treatment is, first, a saline aperient, and then, for two or three days, a saline mixture. Subsequently, tonics, and especially quinine, are useful, and may be necessary. Wine may be given when the patient is low. Milk and beef-tea form the best diet. A warm atmosphere is beneficial, and frequent irrigation of the throat with warm water may be practised. Occasionally, in severe cases, the tonsils may be painted with glycerin and tincture of iron.

CASE OF ŒSOPHAGOTOMY.—Dr. George W. Gay reports (*Boston Medical and Surgical Journal*, 1879, p. 356) the case of a woman in whose throat a thin fish-bone, 1¼ in. long by ¼ in. wide, became impacted. When first seen, thirty hours after the accident, she could only swallow a few drops of fluid; no solid food had been taken from the first. There were two sore points,—one near the cricoid cartilage, which had persisted from the beginning (a probang had been used at first), and another opposite the centre of the sternum, which came on later, giving the patient the impression that the foreign body had moved downwards. The symptoms not being urgent, operation was delayed. The next day the patient was worse,—restless, anxious, and dejected; pulse 100; temperature 100.5°. Deglutition was accomplished only after repeated and strenuous efforts. Careful trials to remove the foreign substance with sponge and bristle probangs failed. The patient was then etherized, on a table, and, the head and shoulders being well raised, œsophagotomy was performed. An incision three inches in length was made on the left side of the neck, midway between the median line and the anterior border of the sterno-cleido-mastoid muscle. The dissection was continued down to the œsophagus, the various vessels, etc., being held back by retractors. At the bottom of the wound a sharp substance was at once detected, pricking through the walls of the œsophagus. It was seized with dressing-forceps, and, by careful manipulation, was made to cut its own way out, pus flowing by its side. The bone was imbedded in the pos-

terior wall of the œsophagus, opposite the cricoid cartilage. The œsophageal wound, being so small, was allowed to take care of itself; the larger wound was closed with silk sutures. The patient was fed solely per rectum for four days; after that she drank freely. The patient left the hospital on the twentieth day after the operation, quite well, and with a natural voice.

CASE OF RECOVERY FROM LEPROSY.—Mr. Jonathan Hutchinson reported a case of complete arrest of the progress of true leprosy to the Medico-Chirurgical Society recently (*British Medical Journal*, 1879, p. 232). The patient had been under observation twenty-seven years. She was a Jewess, born of parents who had lived only in England, of a family in which no leprosy taint existed. At the age of 32 she went to live in Jamaica, and twelve years later she returned, the subject of leprosy in a severe form. The tubercular and anæsthetic symptoms were present in combination. For the last twenty years she had considered herself well. Mr. Hutchinson believed the chief element in the cure was change of residence, and consequent change of diet, especially cessation from fish.

A VEGETABLE PEPTONE-ALBUMEN SOLUTION FOR THE USE OF THE SICK.—Dr. F. Penzoldt, of Erlangen (*New York Med. Record*; from *Deutsche Med. Wochen.*, Nos. 33 and 34, 1878) prepares from pea-flour, by means of pepsin and salicylic acid, a vegetable peptone solution which he has found by clinical experience to possess great practical value. He recommends it as a supplement to, not as a substitute for, Leube's meat-solution, over which, however, it possesses the advantages of being much less costly and less troublesome to prepare, and of being very agreeable to the taste. The method of preparation is very simple: 8 ounces of finely-powdered pea-flour, one quart of water, 15 grains of pure salicylic acid, and 7½ grains of pepsin (it is most important that this last should be of an excellent quality) are thoroughly mixed together, and then left in a warm place (not above 100° F.) for twenty-four hours, during which time the mixture must be frequently stirred. It is then filtered through thick linen, which retains the starch, and the peptone-albumen solution is obtained. It has the appearance of pea-soup, and a delicately sweetish taste. The salicylic acid was at first added, in Dr. Penzoldt's preliminary experiments, to prevent the fermentation that sometimes occurred; but he soon found that it could be substituted for the hydrochloric acid, as it possessed fully as much, and perhaps more, digestive activity.

Before the solution is used it should be gently heated over a water-bath, and at the same time it may be reduced somewhat in volume, so that only enough to fill two soup-plates—a sufficient quantity for one day—remains. In warming, a portion of the albumen separates in the form of small flocculi, and a thin, mechanically unirritating pap is formed, which contains the peptones in solution. Salt must be added to it in proper quantities, and it may be flavored to taste with root and fruit extracts, Liebig's extract, etc. Dr. Penzoldt reports several cases in which this solution acted very satisfactorily, among them being some cases of ulcer and catarrh of the stomach, and one each of dysentery and diabetes. In all the cases it was well borne, and the patients took it willingly, and improved on it. It seems to be applicable more especially in cases of gastric ulcer and of chronic catarrh, dilatation, and carcinoma of the stomach, but also in cases of chronic catarrh of the intestines, dysentery, convalescence from typhoid fever, anæmic conditions with weak digestive powers, diabetes, etc.

The same solution may be employed as a nutritive enema; only in its preparation for this purpose the pancreatic ferment must be substituted for the pepsin. The following is the formula for it: 8 ounces of pea-meal, 1 pint of water, 15 grains of salicylic acid, and 10 drops or more of pancreatin-glycerin; mix well, and allow it to stand for several hours to a day in an ordinary temperature. During this time some peptonization takes place, but no sugar is formed. The fluid is then simply poured off, a little of the meal being allowed to go with it, and the nutritive enema is ready. There will be about enough for two clysters, which may be administered with any ordinary syringe. In the rectum more peptones and some sugar are formed, and in favorable cases are entirely absorbed. The injection is, as a rule, well retained. One patient, a phthisical man, retained it for four hours, and asserted that he experienced a feeling of contentment after it. After four hours he passed some feculent masses, in which no peptone-reaction could be demonstrated, although the injected solution presented this reaction very distinctly.

EFFET À DISTANCE.—A correspondent writes to the *British Medical Journal*, relating the case of a female patient who "was never troubled with after-pains." When asked how she prevented their occurrence, she said that, in accordance with the advice of a "woman from America," she had, during her last two labors, put some steel, in the shape of carpenters' tools, under her bed, and had had no after-pains, though formerly she had suffered very much. The correspondent relates a parallel case, that of an old lady subject to cramps in the extremities at night, which she prevents by having a piece of rock-sulphur placed in her bed. If this is removed, even unknown to her, she is sure to suffer. "So much is now written about metallo-therapy," says the correspondent, "that if any of your readers can give an explanation of the above cases they will oblige."

PLASTIC FLOUR.—A specimen of flour exhibited at the Lord Mayor's court in London,

recently, was shown to contain seventy per cent. plaster of Paris. To demonstrate the nature of the spurious flour, the health-officer exhibited the plaster head of a donkey made from it. Whether his Worship considered this in the light of a personal affront to a relative is not stated, but he "most rudely and unjustifiably declined" to have the flour condemned.

## MISCELLANY.

A NEW INDUSTRY.—The "awful examples" of the effects of drunkenness held up to abhorrence by temperance advocates have heretofore usually been living. More recently it appears that the aid of pathology has been sought to enforce habits of sobriety. The following note has been sent to the editor of the *Lancet* by a correspondent:

"SIR,—My attention has just been drawn to the enclosed advertisement in a paper called the *Bazaar, Exchange, and Mart* of this day's date:

"'First-class slide of drunkard's liver, also of healthy liver, for comparison, with explanatory remarks. Post free, 3*s.* 2*d.*, from Dr. —.'

"Yours faithfully,

"F.R.C.S.

"February 22, 1879."

The correspondent is shocked by this public barter of human viscera, but we should like to see the custom extended. We have seen specimens of "sclerosis of cheek" on the part of patients trying to dodge the payment of bills, which, properly mounted, could be made most effective as warnings to young and inexperienced doctors inclined to trustfulness.

UNCOOKED FOOD AS DIET.—A German physician has started a theory that all food should be eaten raw, as all the nutritive qualities meat and vegetables possess are in a great measure, if not entirely, destroyed by cooking. Persons afflicted with gout, rheumatism, or indigestion are advised to try uncooked food, such as oysters and fruit, and they will find all medicines unnecessary. The yearning for drink, says this German philosopher, is caused by the unnatural abstraction of the aqueous element from the "solids," which, as in the case of uncooked beef, for instance, amounts to seventy or eighty per cent. All this might pass, and be deemed worthy of consideration, but when the same learned pundit goes on to say that clothes are a mistake, most people will give him up. Apart from appearances being against him, the recent severe weather is not favorable to his theory.—*Medical Press and Circular.*

DEATH OF THREE WELL-KNOWN FRENCH PHYSICIANS.—Intelligence has been received of the death of Bazin, the veteran dermatologist; of Ambroise Tardieu, the distinguished authority on medical jurisprudence; and of Dr. Chauffard, Professor of General Pathology. The latter was a brilliant lecturer, but for some reason—political, probably—very unpopular with the Parisian medical students.

COLONEL WARING, the distinguished sanitary engineer, is described in the *Sanitarian* as coming from Newport, "a fishing village on the New England coast, where his nostrils are regaled by the prophylactic odor of defunct fish and the salubrious exhalations of riparian deposits; where the water is rich and sparkling with stimulating nitrates, and where the mere suggestion of sanitary reform would be considered as a public insult."

GIANT BIRTH.—Dr. A. P. Beach reports (*New York Medical Record*, March 22) a labor, in the case of Mrs. Bates, 7 feet 9 inches in height, whose husband is 7 feet 7 inches in height. The amniotic fluid amounted to five gallons. There was inertia, making the labor difficult; but the patient was finally delivered of a healthy child weighing 23¾ pounds; height, 30 inches; breast-measure, 27 inches; breech, 27 inches; head, 19 inches; foot, 5½ inches in length. The secundines weighed 10 pounds.

JEFFERSON MEDICAL COLLEGE.—At a meeting of the Board of Trustees of the Jefferson Medical College, held Thursday evening, 3d instant, in the hospital building, Dr. William S. Forbes was elected demonstrator of anatomy. The other candidates were Dr. Henry C. Chapman, Dr. W. W. Keen, and Dr. John B. Roberts.

DR. GEORGE B. WOOD died March 31, at 12.45 A.M., in the 83d year of his age. A full obituary of him will appear in our next issue.

## OFFICIAL LIST

*OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM MARCH 23 TO APRIL 5, 1879.*

TILTON, H. R., MAJOR AND SURGEON.—Assigned to duty at Fort Riley, Kansas, relieving Assistant-Surgeon Kilbourne. S. O. 53, Department of the Missouri, March 20, 1879.

EWEN, C., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for twenty days on account of disability. S. O. 45, Department of the East, March 24, 1879.

MOSELEY, E. B., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for six months on surgeon's certificate of disability, with permission to leave the Department of the Platte. S. O. 71, A. G. O., March 24, 1879.

DE LOFFRE, A. A., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Jackson Barracks, New Orleans, La. S. O. 47, Department of the South, March 19, 1879.

REED, W., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for fifteen days' extension. S. O. 34, Department of Arizona, March 14, 1879.

KILBOURNE, H. S., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Reno, Indian Territory. S. O. 53, c. s., Department of the Missouri.

POWELL, J. L., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Fort Griffin, Texas. S. O. 65, Department of Texas, March 29, 1879.